Please distribute to the following:

100/300 AREA UNIT MANAGER MEETING ATTENDANCE AND DISTRIBUTION

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Lewis, Jacquie	jllewis@wch-rcc.com	H4-21	WCH

100/300 AREA UNIT MANAGERS MEETING APPROVAL OF MEETING MINUTES

March 10, 2011

APPROVAL:	Mark French, DOF/RL (A3-04) River Corridor Project Manager	Date	4/14/11
APPROVAL:	Briant Charboneau, DOE/RL (A6-33) Groundwater Project Manager	Date	04-14-2011
APPROVAL:	Nina Menard. Ecology (H0-57) Environmental Restoration Project Manager	_ Date	<u>04/14/11</u>
APPROVAL:	Laura Buelow, Rod Lobos, or Christopher Guzzetti, EPA (B1-46) 100 Area Project Manager	_ Date	4/14/11
APPROVAL:	Larry Gadbois, EPA (B1-46) 300 Area Project Manager	_ Date	4-14-2011

100 & 300 AREA UNIT MANAGER MEETING MINUTES

Groundwater and Source Operable Units; Facility Deactivation, Decontamination, Decommission, and Demolition (D4); Interim Safe Storage (ISS); and Mission Completion

March 10, 2011

ADMINISTRATIVE

- Next Unit Manager Meeting (UMM) The next meeting will be held April 14, 2011, at the Washington Closure Hanford (WCH) Office Building, 2620 Fermi Avenue, Room C209.
- <u>Attendees/Delegations</u> Attachment A is the list of attendees. Representatives from each agency were present to conduct the business of the UMM.
- <u>Approval of Minutes</u> The February 10, 2011, meeting minutes were approved by the U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and U.S. Department of Energy, Richland Operations Office (RL).
- Action Item Status The status of action items was reviewed and updates were provided (see Attachment B).
- Agenda Attachment C is the meeting agenda.

EXECUTIVE SESSION (Tri-Parties Only)

<u>Executive Session</u>: An Executive Session was not held by RL, EPA, and Ecology prior to the March 10, 2011, UMM.

INTEGRATED SCHEDULE FOR CROSS-CUTTING ISSUES AND DOCUMENTS

The new agenda item was included for discussion of cross-cutting issues and documents. It will be discontinued next month.

100-F & 100-IU-2/100-IU-6 AREAS (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 2 provides a schedule and map showing the status of remediation at 100-IU-2 and 100-IU-6. No issues were identified and no agreements or action items were documented.

100-D & 100-H AREAS (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. No issues were identified and no action items were documented.

Agreement 1: Attachment 3 documents Ecology approval to treat the 128-H-1 lead contaminated soil in accordance with the "Treatment Plan and Protocol for the Treatment of Lead Contaminated Soils, WCH-252, Rev. 2."

Agreement 2: Attachment 4 documents Ecology approval to move the 126-H-2 clearwell verification closeout sampling points for sample locations B-10, A-11, and A-12.

100-N AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 5 provides status and information for D4/ISS at 100-N. No issues were identified and no agreements or action items were documented.

100-K AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 6 provides aerial photograph of the 118-K-1 Burial Ground. No issues were identified and no agreements or action items were documented.

100-B/C AREA (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 7 provides a schedule and map showing the status of remediation at 100-C-7. Attachment 8 provided aerial photographs of the 100-C-7. No issues were identified and no agreements or action items were documented.

300 AREA - 618-10/11 (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. No issues were identified and no agreements or action items were documented.

300 AREA - GENERAL (GROUNDWATER, SOILS, D4/ISS)

Attachment 1 provides status and information for groundwater. Attachment 9 provides status and information for field remediation activities. Attachment 10 provides status and information for D4 activities. No issues were identified and no action items were documented.

<u>Agreement 1</u>: Attachment 11 documents EPA approval of TPA-CN-430 that modifies the Removal Action Work Plan for River Corridor General Decommissioning Activities (DOE/RL-2010-34, Rev. 0) to add the 331-C, 331-D, 331-G, and 331-H facilities.

REGULATORY CLOSEOUT DOCUMENTS OVERALL SCHEDULE

No issues were identified and no agreements or action items were documented.

MISSION COMPLETION PROJECT

Attachment 12 provides status and information regarding the Orphan Sites Evaluations, Long-Term Stewardship, River Corridor Baseline Risk Assessment, the Remedial Investigation of Hanford Releases to the Columbia River, and a Document Review Look-Ahead. No issues were identified and no agreements or action items were documented.

5-YEAR RECORD OF DECISION ACTION ITEM UPDATE

Attachment 13 provides the latest status of the CERCLA Five-Year Review action Items. No issues were identified and no agreements or action items were documented.

Attachment A

100/300 AREA UNIT MANAGER MEETING ATTENDANCE AND DISTRIBUTION March 10, 2011

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Attachment B

100/300 Area UMM Action List March 10, 2011

Open (O)/ Closed (X) No.	Co.	Actionee	Project .	Action Descripti	on .	Status

Attachment C

100/300 Area Unit Manager Meeting March 10, 2011 Washington Closure Hanford Building 2620 Fermi Avenue, Richland, WA 99354 Room C209; 1:30-4:30 p.m.

At the January 13, 2011, UMM it was agreed that the Executive Session would be cancelled so that the general session could start earlier to allow time to discuss a new topic (Integrated Schedule for Cross-cutting Issues and Documents).

1:00 - 1:15 p.m. Administrative:

- Approval and signing of previous meeting minutes (February 2011)
- o Update to Action Items List
- Next UMM (4/14/2011, Room C209)

1:15 - 1:45 p.m. Open Session: Integrated Schedule for Cross-cutting Issues and Documents

1:45 - 4:00 p.m. Open Session: Project Area Updates - Groundwater, Field Remediation, D4/ISS:

Note: Each session is estimated at 5 to 15 minutes.

- o 100-F & 100-IU-2/6 Areas (Greg Sinton/Tom Post/Jamie Zeisloft)
- o 100-D & 100-H Areas (Jim Hanson/Tom Post/Joanne Chance)
- o 100-N Area (Joanne Chance, Rudy Guercia, Mike Thompson)
- o 100-K Area (Jim Hanson, Jamie Zeisloft, Ellen Dagon, Steve Balone)
- o 100-B/C Area (Greg Sinton, Tom Post)
- o 300 Area 618-10/11 exclusively (Chris Smith)
- o 300 Area (Mike Thompson/Chris Smith/Rudy Guercia)
- o Regulatory Closeout Documents Overall Schedule (John Neath, Mike Thompson)
- o Mission Completion Project (John Sands)

4:00 - 4:15 p.m. Special Topics/Other

5-Year Record of Decision Action Item Update (Jim Hanson)

4:15 - 4:30 p.m. <u>Adjourn</u>

Attachment 1

100-FR-3 Groundwater Operable Unit - Nathan Bowles / Mary Hartman

(M-015-64-T01, 11/30/2011, Submit CERCLA RI/FS Report and Proposed Plan for the 100-FR-1, 100-FR-2, 100-FR-3, 100-IU-2, and 100-IU-6 Operable Units for groundwater and soil.) Schedule Status - On schedule to meet TPA milestone. Field investigations are nearly complete.

RI/FS characterization boreholes were completed. Two of them were completed as temporary monitoring wells: C7970 at 116-F-14 (well 199-F5-55) and C7972 near F reactor (well 199-F5-56). The final developed groundwater samples have not yet been collected from these wells. Borehole C7971, in the 118-F-1 burial ground, was decommissioned after sampling groundwater collected from the drilled borehole.

Collection of additional upwelling (river pore water) samples was completed in February. This sampling was conducted under TPA-CN-391 (adding scope to the 100-F and IU-2/6 RI/FS SAP) as approved by DOE/RL and EPA. Preliminary Cr(VI) results show only one of twenty locations with a detection of Cr(VI): 4.6 μ g/L. The location with 20 μ g/L in Phase III of the WCH study had a validation qualifier of "J" (estimate) and was associated with a lower total Cr result (4 μ g/L in a filtered sample). This location was resampled in February, with no detectable Cr(VI). Note that the river stage in the recent sampling was higher than during previous studies. However, samples were only collected if conductivity and temperature indicated the presence of upwelling groundwater.

The temporary aquifer sampling tubes in the base of the 600-127 waste-site excavation (under TPA-CN-400) were decommissioned. Results of sampling were reported during the last unit manager's meeting.

The frequency of sampling well 199-F5-48 was increased from biannual to semiannual. The well is located downgradient of waste site 100-F-57, where Cr(VI) contamination was recently found in soil. The well is next scheduled for sampling in April. Chromium concentrations in this well typically range from 10 to 20 μ g/L.

Fall 2010 aquifer tube sampling was delayed into early 2011; a few tubes were sampled successfully and some others were submerged. Sampling is planned for later this month. These tubes will be given priority when sampling resumes, as the data feed into the remedial investigation.

The 2010 site-wide annual groundwater report is being edited prior to internal review.

100-HR-3 Groundwater Operable Unit - Fred Biebesheimer / Jim Eluskie

(M-15-70-T01, 07/30/2011, Submit feasibility study report and proposed plan for the 100-HR-1, 100-HR-2, 100-HR-3, 100-DR-1 and 100-DR-2 operable units for groundwater and soil.) Schedule Status - On schedule to meet TPA milestone. Field investigations were initiated following approval of the Rev. 0 RI/FS work plan documents. Drilling and sampling continue and are anticipated to be completed at the end of March.

- HR-3 Treatment System
 - For the period February 1 through 28, 2011:
 - The system is pumping with four wells from the 100-D North plume (199-D8-53, 199-D8-54, 199-D8-68, and 199-D8-72), two RUM wells in 100 H Area (199-H3-2C & 199-H4-12C), and three wells in H Area along the river (unconfined; 199-H4-15A, 199-H4-3, and 199-H4-63).
 - Total average flow through the system was 208 gpm.
 Average influent hexavalent chromium concentration for H Area was 48 μg/L.

Average influent hexavalent chromium concentration for D Area was 53 µg/L.

- DR-5 Treatment System
 - For the period February 1 through 28, 2011:
 - The DR-5 was running with two wells downgradient of the North plume (199-D5-20 and 199-D5-92) and two wells slightly downgradient of the "hot spot" in the South plume (199-D5-39 and 199-D5-104).
 - During the last week of February, the system was brought down to start realignment activities to add the DR-5 wells to the DX system.
 - Total average flow through the system was 27 gpm.
 - The average influent hexavalent chromium concentration was 1317 μ g/L.

DX Pump and Treat system

- For the period February 1 through 28, 2011:
 - The DX pump and treat system is performing Operations Test Procedure activities.
 - Total average flow through the system is 483 gpm.
 - The average influent hexavalent chromium concentration was 277 μg/L.

ISRM Pond Sealing

- Waiting for ISRM pond liquids to finish evaporation.
- CHPRC is evaluating decommissioning path forward. Upon completion of the evaluation a meeting will be held to present recommendations.
- Planned treatment capacity at the 100-HX facility is 800 gpm. The formal HX design is being issued. Construction is underway on road maintenance, HDPE pipe runs (215,025 of 318,000), and 24 of 27 road crossings have been completed. Process building construction is complete, and the site is being prepared for process equipment installation. Major process building efforts include wiring process equipment installation. Transfer building construction is complete.
- In situ Bioremediation Treatability Test
 - Due to the timing of the RI/FS, and evaluation of the RI/FS engineering data needs, it has been determined that enough technical data is available to conduct the FS using site specific data (as well as data from other sites). Therefore, the TTP will most likely be performed post-ROD, as a remediation design test.
- EM-22 Technology Projects
 - The ZVI amendment test report is expected to be issued in March 2011.

RI/FS Activities

- All three spatial and temporal uncertainty groundwater sampling events have been conducted. Data are still being received from the laboratories.
- RI/FS aquifer tube installation and three sampling rounds are completed.
- Drilling and installation has been completed at wells 13 of 15 wells. One additional well will be installed at the location of well 9.
- Installation and sampling of all 10 boreholes is complete. Several of these have been completed as temporary wells.
- Test pits have been installed at 1607-H4, 116-H2, 100-D-4, and 116-D-4. Test pit 100-D-12 is on hold pending overhead power issue resolution.

100-NR-2 Groundwater Operable Unit - Nathan Bowles / Deb Alexander

- (M-015-61, 12/31/2009, Submit RI/FS Work Plan for the 100-NR-1 and 100-NR-2 Operable Units.) Schedule Status- TPA milestone met by DOE/RL submittal of Draft A document to Ecology on December 22, 2009. Ecology comments on the Draft B version of the document have been resolved and incorporated into a Rev. 0 document. Approval of this document is pending (planned for March 10, 2011). The Rev. 0 SAP was approved by DOE/RL, Ecology, and EPA in January. No additional work scope was added to the work plan addendum during the comment resolution, so there is now no identified need to revise the Rev. 0 SAP to a Rev. 1 alongside the finalization of the Rev. 0 work plan addendum.
- (M-015-60, six months after the ROD amendment [03/29/2011], if an amendment to the 100-NR-1/2 Record of Decision for Interim Action is issued, DOE shall submit an RD/RA Work Plan.) Schedule Status On schedule to meet TPA milestone. The revision to the NR-1/2 OU Interim Action Remedial Design/Remedial Action Work Plan has continued with a decisional-draft (DOE/RL) review complete and incorporation of the resulting DOE/RL comments into the Rev. 1 Draft A version of the document. The revised document will be submitted to RL for subsequent submittal to Ecology following technical editing and release. In order to meet this milestone, the draft revision is due to the regulators within six months of the IROD Amendment issue date, resulting in a March 29, 2011 due date.
- (M-015-62-T01, 12/31/2011, Submit a Feasibility Study [FS] Report and Proposed Plan [PP] for the 100-NR-1 and 100-NR-2 Operable Units including groundwater and soil. The FS Report and PP will evaluate the permeable reactive barrier technology and other alternatives and will identify a preferred alternative in accordance with CERCLA requirements.)

 Schedule Status Future schedule status will depend on approval of 100-N RI/FS work plan addendum (pending). If the work plan addendum is approved on March 10, 2011, then RL will be pursuing a revised due date of September 17, 2017 (implementing a 261 day slip).
- 100-N Integrated Groundwater Sampling and Analysis Plan The Draft A document was submitted to Ecology by RL on June 2, 2010, and is still under Ecology review. Ecology review of this document is temporarily on hold to allow resources to focus on higher-priority documents agreed to by DOE/RL and Ecology. Based on recent work associated with the revision to the NR-2 RD/RA Work Plan, this SAP will likely need revision to a Draft B once the RD/RA Work Plan revision is approved.

RI/FS Activities

- Spatial-and-temporal groundwater well sampling: The third round of sampling was completed on February 27, 2011, with the sampling of the one remaining well, 199-N-18. Following sampling of this remaining well, all of the spatial-and-temporal groundwater sampling requirements of the Rev. 0 RI/FS SAP will be satisfied.
- Well drilling: Preparations are continuing for drilling and sampling of the eight proposed RI/FS wells. The drilling subcontract was awarded, and drilling is scheduled to be initiated by mid March.

Annual Reports

- The 2010 site-wide annual groundwater report and the 100 Areas pump-and-treat performance report are being edited prior to internal review.

Phytoextraction

- Ecology comments on the Draft A TTP for conducting a "hot" demonstration-scale treatability test of phytoextraction at the NR-2 site have been incorporated into the document and for Ecology consideration.

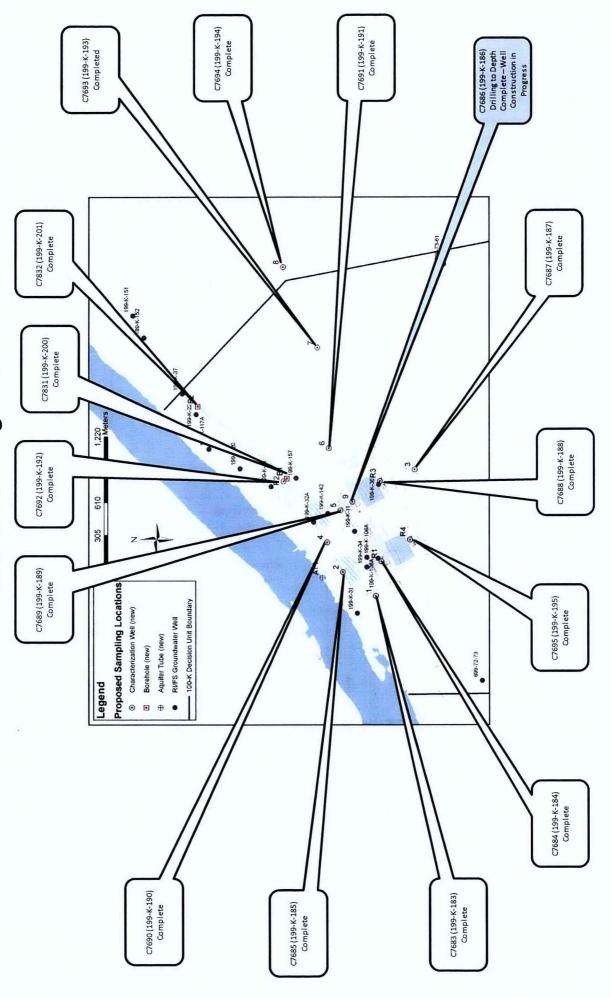
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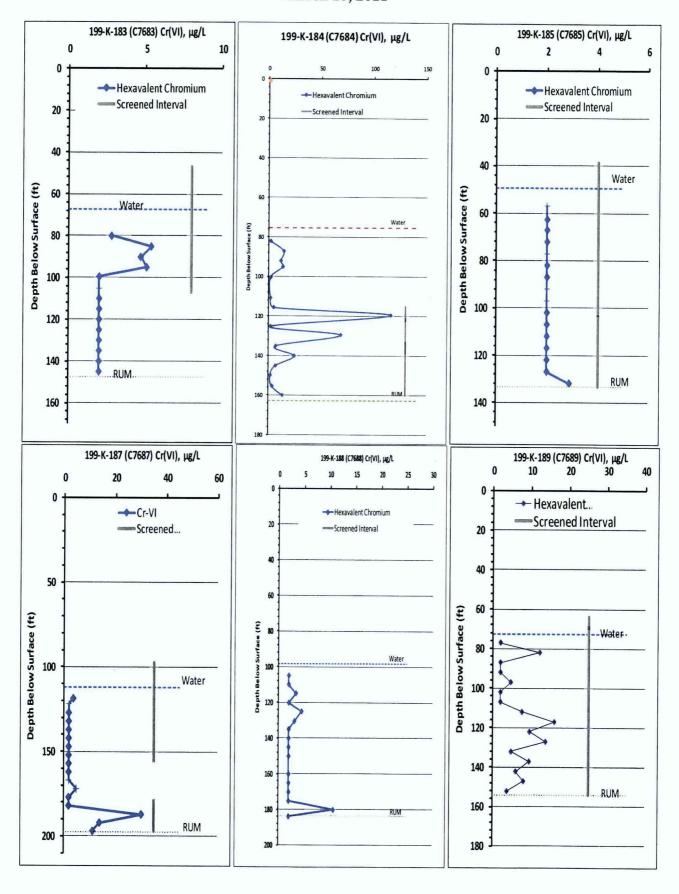
- The Jet Injection DOS was approved in January. Planning activities are continuing for implementing this study (including subcontract modification and development of the field test instructions).
- Field pilot testing of the NR-2 infiltration gallery was performed in September through November of 2010. The draft final report on this test is being finalized by PNNL for and expected issuance in March.

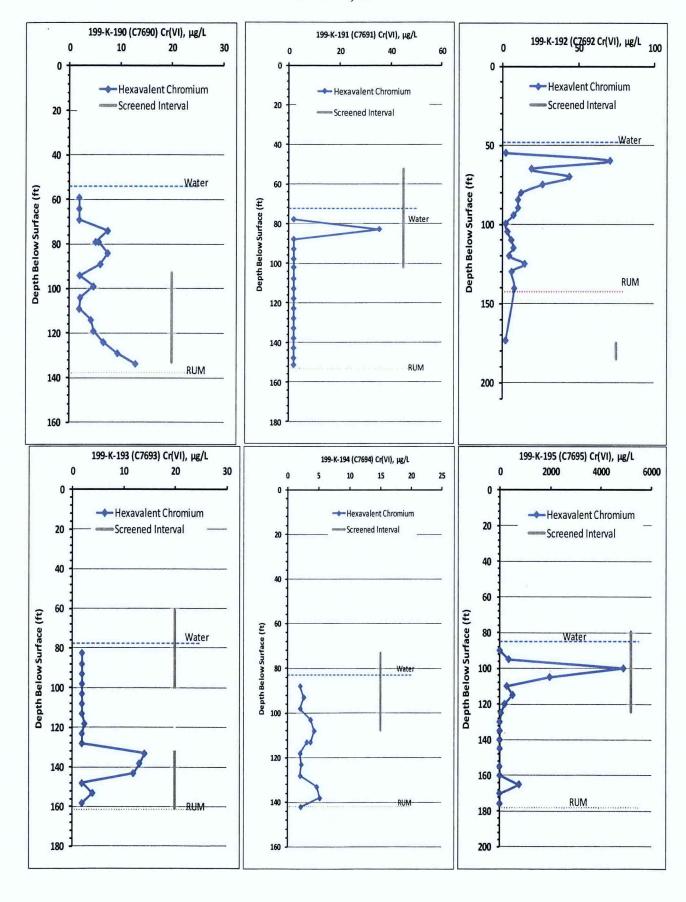
100-KR-4 Groundwater Operable Unit - Art Lee

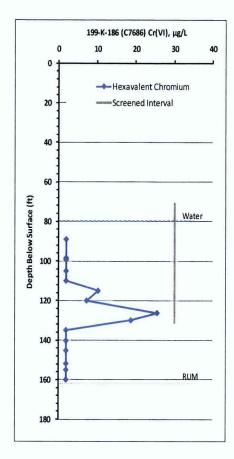
- RI/FS Activities:
 - Drilling and sampling of the RI wells and boreholes completed.
 - Data validation is in progress.
 - Development of RI/FS report in progress. Internal review completed for Chapters 1-3 of the RI/FS report and Ch 6 and 7 are in internal review. Author drafts are in progress for the remainder of the report for internal review in April.

100-K RI Drilling Status









- Pump and Treat Systems Expansions and Modifications:
 - Phase 3 Realignment is in progress to add 1 new extraction well to KW, 2 new extractions wells to KR-4, and 6 spare lines to KX P&T systems.
 - Drilling is underway for first of the four Phase 3 wells (199-K-199).
 - Completion of acceptance testing of KR-4 P&T PLC upgrades in progress. Testing is approximately 85% complete.
 - Construction work completed to convert 199-K-152 to an extraction well and walk down performed. Punchlist prepared and well will be placed on line following completion of prestart punchlist items.
 - Planning is underway for implementing RPO recommendations for additional wells to support 2020 groundwater cleanup target.
 - Process Test Plan for Implementation of ResinTech SIR-700 in the KW pump and Treat Facility updated following ResinTech recommendations and internal review Facility modifications.
 Resin procurement and facility modifications designs for increased acid addition have been initiated for the test. Test is scheduled to start in April 2011.

Pump and Treat Operations:

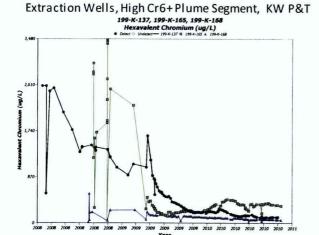
- Work is continuing on the 2010 Annual Pump-and-Treat Performance Report for RL review in April.
- Several KR-4 extraction wells have hexavalent chromium contamination levels below 10 ppb and the extraction wells are running at reduced flow rate to maintain resin performance.
- KX and KW pump and treat systems are operating normally.
 - Average Flow Rates in January:
 - KX 452 gpm with 199-K-149 and 150 shut off
 - KW 198 gpm (99% capacity)
 - KR4 210 gpm with reduced flow at <10 ppb wells
 - Cr(VI) Removed in January:
 - KX 5.4 pounds (average influent 39.8 ppb)
 - KW 5.7 pounds (average influent 86.4 ppb)
 - KR4 1.5 pounds (average influent 22.1 ppb)
- The revised Authorized Limit Application for the resin regeneration has been approved. Revised authorized limit for C-14 based on dose modeling for C-14 is 800 pCi/g. This allows for shipment of resin totes exceeding current C-14 limit. Shipments of resin on hold for the revised ALA are scheduled to be shipped in March.
- Analytical results for Sr-90 were above the DWS (8 pCi/L) from January monitoring sample from extraction well 199-K-141. Analytical results indicated 12 pCi/L Sr-90. A reanalysis has been requested to confirm the results, plus another sample has been requested for analysis. Review of the KX influent and effluent tank samples did not identify any detectable Sr-90.

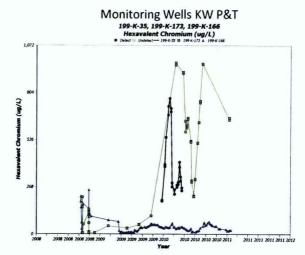
Monitoring Activities:

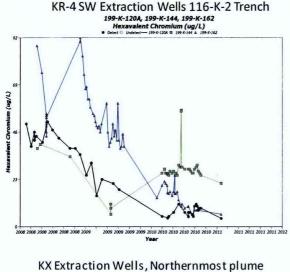
- Monthly Cultural Monitoring: The monitoring was conducted on Friday February 18th. One new off-road driving incident was observed this month. There were some tire tracks off the south side of the access road to well pad 199-K-194. Since this well is not on the lower terrace or within the Mooli Mooli TCP it is not a non-compliance issue for cultural resources.
- Routine Monitoring:
 - In January 2011, 32 wells and 3 aquifer tubes were sampled and 220 samples were collected. In February 2011, 9 wells and 2 aquifer tubes were sampled with 50 samples collected. This

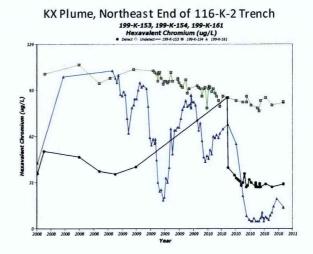
largely completes the Fall 2011 sampling list for groundwater wells and aquifer tube that are still being worked.

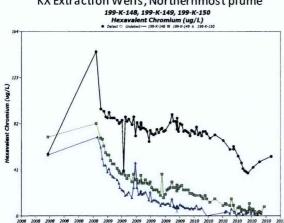
- Average monthly values from KW extraction wells were at or above the 20 μg/L aquatic standard in January and February (ranging from 20.8 ug/L to 230 ug/L), except for wells 199-K-138 and 199-K-166 which were at 16.1 μg/L and 9.8 ug/L, respectively, for lab analyses in February.
- Well 199-K-173 is being converted to an extraction well to the KW P&T to address high Cr6+ detected at the monitoring well (968 μg/L in August and 659 μg/L in Jan 2011).
- Wells 199-K-149 and 199-K-150 in the KX Northern plume are below 10 ppb and are being converted to monitoring wells. Wells 199-K-152 and 199-K-182 will serve as replacement extraction wells.
- Long-term decreases in overall Cr6+ levels observed at KX extraction wells at Northeast end
 of the K-2 Trench. Only well 199-K-22 and new shallow RI/FS well 199-K-201 at 116-K-2
 trench show continuing high values above 100 μg/L.
- Wells 199-K-29 and K-30 located within excavation zone of buildings 115-KE and 117-KE are being decommissioned in support of subsurface remediation. The wells were geophysically logged and water samples collected prior to decommissioning.
- Well 199-K-18, which has shown an increasing Cr6+ concentration trend since December 1996, now has three quarters of results with decreasing Cr6+ concentrations. After peaking at 190-200 μg/L in Spring 2010, concentrations have declined to 173 and 131 μg/L in August 2010 and January 2011. Hexavalent chromium concentrations at the downgradient extraction wells 199-K-162 and K-120A declined or remained below 10 μg/L for January. Extraction well 199-K-145 declined from 62 to 46 μg/L between early October 2010 to 46 μg/L in January 2011.

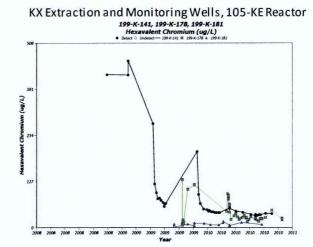












100-BC-5 Groundwater Operable Unit - Nathan Bowles / Mary Hartman

(M-015-68-T01, 11/30/2011, Submit CERCLA RI/FS Report and Proposed Plan for the 100-BC-1, 100-BC-2 and 100-BC-5 Operable Units for groundwater and soil.)

Schedule Status - On Schedule to meet TPA milestone. Field investigations are now complete.

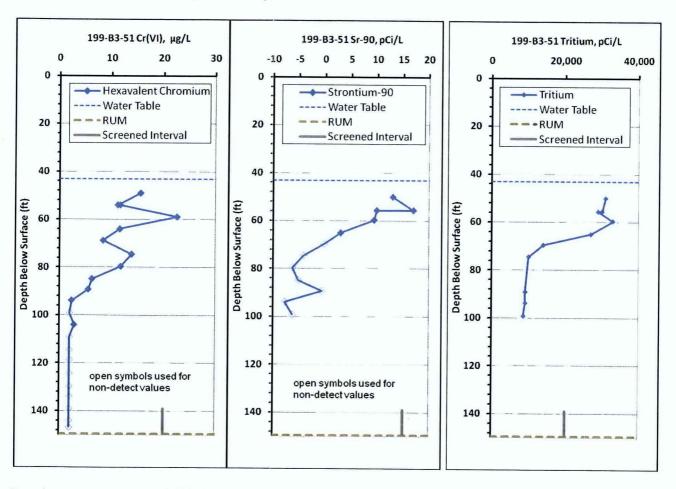
Status of RI well drilling:

C7508	199-B8-9	Sample ready
C7783	199-B2-15	Sample ready
C7784	199-B2-16	Sample ready
C7785	199-B3-51	Complete; not yet "accepted"
C7786	199-B4-14	Sample ready
C7787	199-B5-7	Hit boulder. Moved 3 ft; see C8244
C8244	199-B5-8	Reached total depth (5 ft into RUM) 3/2/2011. Being
		huilt

Well 199-B5-8, located southeast of 100-BC, was drilled 5 ft into the RUM. The Cr(VI) concentrations were all below 5 μ g/L, and most were non-detects. The well will be screened at the top of the aquifer.

The dissolved oxygen of 199-B5-8 characterization samples has been relatively low throughout the aquifer (4.5 to 6.5 mg/L in many samples; lower in some cases). The borehole produces 8 gpm and the purges have been adequate, so it appears that the lower dissolved oxygen represents actual aquifer conditions.

Some of the vertical profile data from well 199-B3-51 are now available. Concentrations of Cr(VI), tritium, and Sr-90 decline with depth at this location (see graphs below). The well is being screened to monitor the base of the unconfined aquifer. Two other wells in the cluster monitor the top of the aquifer (199-B3-47) and the RUM (199-B2-12).



Routine sampling of 100-BC Area wells began in January. No additional wells were sampled in February. Six wells have not yet been sampled. New wells and both wells downgradient of 100-C-7 are sampled quarterly.

Fall 2010 aquifer tube sampling was delayed into early 2011; this began in early March. Additional sampling is planned for later this month. These tubes will be given priority, as the data feed into the remedial investigation.

The 2010 site-wide annual groundwater report is being edited prior to internal review.

300-FF-5 Groundwater Operable Unit - Mark Kemner / Bob Peterson

(M-015-72-T01, 11/30/2011, Submit CERCLA RI/FS Report and Proposed Plan for the FF-5 Operable Units for groundwater and soil.)

Schedule Status - On Schedule to meet TPA milestone. Field investigations are underway. The first 11 monitoring wells in the RI/FS work plan are complete. Of the remaining five temporary wells, four have now been drilled to total depth and have been constructed. Drilling should conclude this week.

- All three rounds of RI/FS spatial and temporal groundwater sampling for 300-FF-5 have been completed. Replanned infiltration testing of tracer and polyphosphate is underway, with candidate sites in cultural and ecological review.
- Alternative emplacement testing field scale work is underway, with a candidate site identified and in cultural and ecological review.
- 300 Area RI/FS Activities (DOE/RL-2009-30)
 - 300 Area Drilling: All eleven of the planned characterization boreholes have been drilled and completed as monitoring wells, with most having their screens at the water table. One has a hybrid screen that monitors the TCE- and DCE-contaminated interval of finer-grained Ringold sediment. They have been formally accepted and are available for sampling, which is scheduled to start in March. Drilling at the five 'temporary well' sites began on February 24 and continues this week. The screens planned for these wells are relatively short (2-ft length) and intended to reveal uranium concentrations in the uppermost portion of the unconfined aquifer.
 - 300 Area RI/FS Report: Draft input on groundwater components in Chapter 2 (RI Investigations) and Chapter 3 (Physical Characteristics) has been completed. Work on Chapter 4 (Nature and Extent) and Chapter 5 (Fate and Transport) is underway.
- 300-FF-5 Operations and Maintenance Plan Activities (DOE/RL-95-73, Rev. 1, 2002)
 - 300 Area Subregion:
 - The December semi-annual sampling event got underway in late January and February. The most recent analytical results are for samples collected in late January. Plume maps and trend charts have been updated for the 2010 annual groundwater report. Sampling of aquifer tubes is scheduled for March.
 - 324 Building hot cell issue: 300 Area RI/FS characterization borehole C7662 (#5, 399-4-15) was completed and is now available as a monitoring well, with the screen positioned across the water table. The first sampling should occur sometime during March.
 - Special sampling downgradient of the 618-7 Burial Ground remediation site: The most recent sampling results from wells that monitor the plume created at this remediation site are for samples collected in late January. Concentrations nearest the burial ground have declined from a peak of 225 μg/L to ~55 μg/L for the most recent results. Weak evidence suggests that the plume has moved downgradient to well 399-3-6, where uranium concentrations are gradually increasing, although alternative explanations for the increasing trend are possible. New monitoring wells 399-6-3 and 399-6-5 are in the downgradient migration pathway and are now available for sampling, which is expected sometime during March.
 - Special sampling near the 618-1 Burial Ground/Acid Neutralization Pit remediation site: Monthly sampling continues at wells 399-1-2 and 399-1-21A, although remediation activities are essentially complete at the waste site. No groundwater impacts attributable to remediation at the waste site have been observed. However, uranium concentrations

do rise at these wells whenever the water rises significantly, suggesting mobile uranium somewhere nearby in the lower portion of the vadose zone.

- 618-11 Burial Ground Subregion: The most recent results are for samples collected in January 2011. No significant changes in concentration trends to report. Tritium values have remained relatively constant at the well closest to the likely area of release in the burial ground. Dispersion and radioactive decay have caused concentrations to gradually decrease in other portions of the plume.
- 618-10 Burial Ground/316-4 Cribs Subregion: No new information since the February unit manager meeting. The most recent results are for a December sample from 699-S6-E4A, which monitors groundwater beneath the former 316-4 cribs remediation site. The most recent sampling at this site was December 2010 at one well. Best available information indicates that all the network wells have been cleared by Industrial Hygiene for sampling. Intrusive remediation activities, along with increased use of dust suppression water, is planned to begin in March.

Attachment 2

Field Remediation IU-2/6



TPA Milestone M-16-56 (02-28-12)
Milestone Description: Complete Interim Remedial Actions for 100-IU-2 & 100-IU-6 Waste Sites

		Comp	747				ŀ		
		3			Feb Mar	Apr May Jun	Jul A	Aug Sep	Oct
600-108			60.0 02-Mar-11 A	23-Jun-11					
6186DP40	600-108 Lab Analysis	50%	7.0 02-Mar-11 A	22-Mar-11					
6186DP60	600-108 Sampling Results	%	1.0 23-Mar-11	23-Mar-11	<u>,</u>	[
6186DP100	600-108 Backfill Concurrence Prep/Submit	%0	16.0 21-Apr-11	18-May-11					
6186DP120	600-108 RL/Reg Approve Backfill Concurrence	%0	4.0 20-Jun-11	23-Jun-11		-			
600-178			60.0 02-Mar-11 A	23-Jun-11					
6186DP90	600-178 Lab Analysis	50%	7.0 02-Mar-11 A	. 22-Mar-11					
6186DP110	600-178 Sampling Results	%	1.0 23-Mar-11	23-Mar-11	<u> </u>	[
6186DP170	600-178 Backfill Concurrence Prep/Submit	%0	16.0 21-Apr-11	18-May-11					
6186DP180	600-178 RL/Reg Approve Backfill Concurrence	%0	4.0 20-Jun-11	23-Jun-11		-			
600-3		The state of the s	61.0 03-Mar-11 A	27-Jun-11					
6186DP130	600-3 Lab Analysis	20%	8.0 03-Mar-11 A	23-Mar-11					
6186DP140	600-3 Sampling Results	%0	1.0 24-Mar-11	24-Mar-11	•	[
6186DP190	600-3 Backfill Concurrence Prep/Submit	%0	16.0 25-Apr-11	19-May-11					
6186DP200	600-3 RL/Reg Approve Backfill Concurrence	%0	4.0 21-Jun-11	27-Jun-11		-			
IU 2 & 6 Backfill			121.0 29-Nov-10 A	12-0ct-11					
IUBFILL001	IU 2 & 6 Close-out Procedure	73%	12.0 29-Nov-10 A	30-Mar-11		<u></u>			
IUBFILL010	Award Contract	%0	8.0 14-Apr-11	27-Apr-11		Ţ.			
IUBFILL020	Submittals	%0	12.0 28-Apr-11	18-May-11		Ţ¹			
IUBFILL030	PSR	%0	12.0 19-May-11	09-Jun-11					
IUBFILL100	IU 2 & 6 Backfill	%0	69.0 13-Jun-11	12-0ct-11		<u> </u>			Π.
600-149:1- Small Ar	600-149:1- Small Arms, Rifle & Pistol Range		49.0 03-Jan-11 A	06-Jun-11		•			
6149R100	Coordinate and Remove UXO (High Density)	85%	9.0 03-Jan-11 A	24-Mar-11					
6149C100	Prepare Final and Closure Reports	%0	40.0 28-Mar-11	06-Jun-11	4				
6149R110	Disposal of UXOs (Army)	%0	4.0 28-Mar-11	31-Mar-11	.				
600-186 - Construct	600-186 - Construction Camp Septic System		16.0 15-Mar-11	11-Apr-11					
6186DP10	Cultural Release of Test Pit #4	%0	1.0 15-Mar-11*	15-Mar-11	Ę	• • • •			
6186PHASE2	Collection of Phase II Samples (Test Pit #4)	80	4.0 16-Mar-11*	22-Mar-11	Ţ				
6186SR	Sample Results	%0	10.0 23-Mar-11	07-Apr-11	¥	Пī	-,		
6186DP	Decision Point	%0	1.0 11-Apr-11*	11-Apr-11		Ŧ		The second second	

Activity /Actions Supporting Schedule

Closeout sample data needed for:
 600-108
 600-178
 600-3

<u>ISSUE / CONCERNS</u>
 Expect cultural release concurrence for 600-186 #4 pit by mid-March.

Milestones	Due Date	Status
TPA M-16-56	2/28/2012	2/28/12 F
PM - 26	3/31/2012	3/31/12 F

Approval to Treat the 128-H-1 Lead Contaminated Soil in Accordance with the "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF LEAD CONTAMINATED SOILS, WCH-252, Rev. 2"

This approval applies to lead contaminated soil from the 128-H-1 burn pit as described under waste profile WP128H1004. The waste matrix consists mainly of soil. Sample# J1B8D5 had a high of 18.3 mg/L TCLP Lead.

The waste is similar to the material treated in "TREATMENT PLAN AND PROTOCOL FOR TREATMENT OF LEAD CONTAMINATED SOILS, WCH-252, Rev. 2". Refer to attached discussion for additional details

This approval allows treatment of this waste using the recipe described in Table 1, Bench-Scale Test Results (Including Results and Reduction Ratios) of the treatment plan under Mixture 1, which limits the TCLP Lead to 23.6 mg/L.

Nina Menard

Washington Department of Ecology

Date

Joanne Chance

JU.S. Department of Energy

Date

Summary of Material Proposed for Treatment

During remediation of the 128-H-1 burn pit, lead contaminated soil was encountered on the western sideslope of the excavation that exceeded land disposal restriction requirements. It is estimated that this material amounts to approximately 45 bank cubic meters of waste. Analysis of the material indicated that it had a concentration of lead at 18.3 mg/L TCLP with no other underlying hazardous constituents identified. WCH requests approval to use Mixture 1 identified in Table 1 of WCH-252 to treat this material.

It is believed this waste fits the profile for treatment under this plan due to the composition of the waste (primarily soil). In addition, the lead concentration of the original pure waste matrix (18.3 mg/L) is less than the concentration that was tested in Mixture 1 (23.6 mg/L) of WCH-252. Results of bench scale treatment of Mixture 1 indicates that at a concentration of 23.6 mg/L, a reduction factor of 649:1 was achieved, which is orders of magnitude greater than required by the regulations.

DISTRIBUTION

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Document Control	H4-11

Attachment 4

156986

^WCH Document Control

From: Saueressig, Daniel G

Sent: Wednesday, March 02, 2011 9:38 AM

To: ^WCH Document Control

Subject: Verification Sampling Location Change at the 126-H-2 Clearwell

Please provide a chron number. This email documents a regulatory approval.

Thanks,

Dan Saueressig FR Environmental Project Lead Washington Closure Hanford 521-5326

From: Menard, Nina (ECY) [mailto:nmen461@ECY.WA.GOV]

Sent: Thursday, February 17, 2011 11:15 AM

To: Thompson, Wendy S; Boyd, Alicia

Cc: Proctor, Megan L; Curcio, Joseph P; Harrison, Robert P; Nielson, Renee J

Subject: RE: Clearwell 126-H-2

Wendy,

Moving the sampling points as described below is fine. Could you bring the agreement to the next UMM to add to the meeting minutes.

Thanks,

Nina M. Menard Project Manager Environmental Restoration WA State Dept. of Ecology (509) 372-7941 (509) 420-6839

From: Thompson, Wendy S [mailto:WSTHOMPS@wch-rcc.com]

Sent: Wednesday, February 16, 2011 3:24 PM **To:** Menard, Nina (ECY); Boyd, Alicia (ECY)

Cc: Proctor, Megan L; Curcio, Joseph P; Harrison, Robert P; Nielson, Renee J

Subject: FW: Clearwell 126-H-2

FW: Clearwell 126-H-2

Page 2 of 3

Nina, Alicia,

156986

Please see the note below from Rob Harrison regarding the safety issues associated with portions of the clearwell walls failing. In order to keep the sampling personnel safe, we need to adjust the locations for sample locations B-10, A-11, and A-12. Rob has provided photographs of the walls in his email below. He has marked the sampling location diagram from the VWI to show the area that personnel need to stay away from and I have attached it for your review.

We would like your concurrence to move the samples away from the hazard area in the following manner:

- Sample locations A-11 and A-12 will be moved approximately 1 meter directly south of their current locations.
- Sample location B-10 will be moved directly west of sample B9 and placed between B11 and B7.

Please let me know if this is acceptable to you.

Thank you, Wendy

<<126-H-2 VWI Sample LocsRPH.JPG>>

From: Harrison, Robert P

Sent: Tuesday, February 15, 2011 4:53 PM **To:** Nielson, Renee J; Thompson, Wendy S

Cc: Curcio, Joseph P; Pearson, Paul V; Proctor, Megan L; Robinson, Kristine M; Fullmer, Jonathan V; Beasley, Michael E; Saueressig, Daniel G; Walker, Jeffrey L

Subject:

FW: Clearwell 126-H-2

Renee and Wendy:

We have been looking at the clearwell conditions (126-H-2) in preparation to collect verification closeout samples. It's become apparent that the eastern half of the north clearwell wall is in failure mode. There are numerous cracks where the outer layer of concrete cover is delaminating and the steel mat is exposed and rusted. Additionally, the wall is deformed and bulges in towards the center of the clearwell. See attached pictures.

I contacted Jeff Walker, previous RE for FR here at 100-H, with regards to this issue. He recalled that they had instituted administrative controls to prevent personnel from being within the fallzone of the wall. Additionally, he forwarded a letter detailing an evaluation of the west clearwell wall by D4 - attached - wherein the wall was deemed to be in failure.

Granted, the wall failure in the east clearwell is not as bad as that in the west clearwell as it currently stands. However, the failure in the west clearwell is much worse now. This suggests that the conditions of the walls are deteriorating.

It is prudent to keep personnel away from the wall, both from the interior as well as at grade outside the clearwell. Consultation with WCH safety has suggested we establish an exclusion zone that is approximately 24 feet away from the wall.

As such we likely need to relocate some of the sample locations for the closeout verification. From my quick

156986

review of the VWI drawing, It looked like the 4 easternmost samples along the north transect may not meet the 24-foot setback. What do you think?

Also, if we need to relocate these samples, do we have implied latitude to do so or do we need to notify and obtain Ecology approval? If so, can you let me know the likely timing on this?

Thanks,

<<Canon pictures 202.jpg>> <<Canon pictures 203.jpg>> <<Canon pictures 204.jpg>>

Rob Harrison, P.E.
Resident Engineer
100-H Area Field Remediation
Washington Closure Hanford
Robert.Harrison@wch-rcc.com
509-554-7132

"Safety, Productivity & Quality Achieved by Integrity & Teamwork."

100 Area D4/ISS Status

March 10, 2011

D4 (WCH)

100-N River Structures (181-N, 181-NE, 1908-NE): Work is nearing completion on the removal of pumps, motors, and miscellaneous equipment at the 181-N and 181-NE Intake Structures. Stop log installation is complete. Bench installation has been rescheduled for the late summer "in water" work window pending completion of agency consultations. NMFS is working on a Biological Opinion (formal consultation), and was onsite earlier today evaluating mitigation options. USFWS is evaluating a DOE request to reinitiate consultation for a newly designated critical bull trout habitat that includes the Hanford Reach. Cultural resource review is complete for the structure demolition. Ecology has responded with comments on the Draft DQO/SAP and a meeting will be scheduled to discuss resolution of the comments.

182-N High Lift Pumphouse: Asbestos abatement has been limited due to recent buildings gantry crane failure. Repairs to crane are expected to be complete within the next week after which full time asbestos abatement activities will resume.

105-N Fuel Storage Basin (FSB): Demolition of Transfer Bay complete. Approximately 20% of above grade FSB has been demolished but further demolition activities have been placed on hold pending FR completing some of their activities at the adjacent 1300-N Dump Basin. Above grade demolition of FSB expected to resume within the next week.

117-N Exhaust Air Filter House: Demolition and load out of tunnels between 116-N and 117-N continues. Rod caves successfully removed from north side of 117-N. Above grade demolition of 117-N to begin later this month.

Other Temporary Structures: D4 continues to demobilize and relocate mobile offices, equipment, and storage area from south side of the 109-N to make the area available for FR to begin remediation of below grade pipelines as needed. Work packages and job hazard analyses have been completed for Buildings 186-N, 1902-N, and 1143-N. These facilities are ready for demolition and will be demolished as needed.

400 Area Buildings: D4 preparing for hazmat removal. Work packages and job hazard analyses for building demolition are nearing completion.

ISS/SSE (Intermech):

105-N Reactor Building: Placement of steel to support roof on pressurizer almost complete. Installation of pressurizer roof to begin next month. Anchor bolt installation continues on roof of 105-N. Structural steel to support 105-N roof to begin arriving on site this month.

109-N Heat Exchanger Building: Roof complete with only a few minor punch list items remaining.

Aerial-Photo March 2011

118-K-1 Burial Ground



Field Remediation 100-C-7



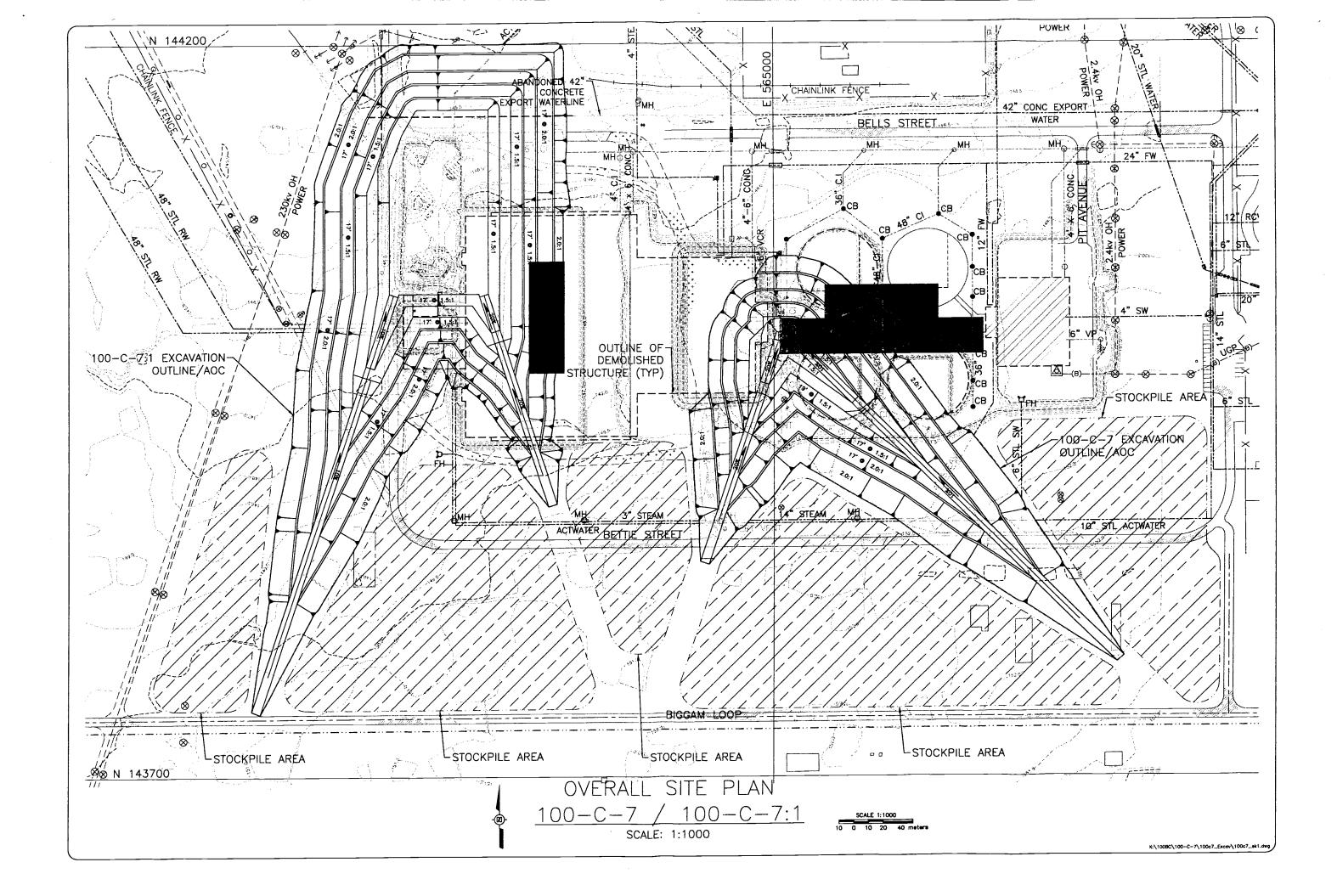
Activity ID Activity Name	ar and	Rem Start	Fnish	2011	A Line of the last	2012	2012
	Cellip			FMAMJJA	TONOS	FMAMJJA	SOND
100-C-7 Excavation		82.0 27-Jan-11 A	03-Aug-11				
BCEXC100 Excavation 0-35 ft- 170,000 BCMS	402	8.0 27-Jan-11 A	23-Mar-11				
BCEXC110 Excavation 36-50 ft 7,700 BCMS	%0	50.0 24-Mar-11	21-Jun-11				
BCEXC120 Excavation 51-85 ft 4,300 BCMS	%0	24.0 22-Jun-11	03-Aug-11	. [].			
100-C-7:1 Excavation		121.0 27-Jan-11 A	12-0ct-11				
BCEXC130 Excavation 0-50 ft 140,000 BCMS	13%	62.0 27-Jan-11 A	28-Jun-11				
BCEXC140 Excavation 51-67 ft 40,000 BCMS	%0	36.0 29-Jun-11	31-Aug-11	[]			
BCEXC150 Excavation 68-85 ft 30,000 BCMS	%0	23.0 01-Sep-11	12-0ct-11	<u></u>	 T		
100-C-7 & 100-C-7:1 Load-Out		142.0 27-Dec-10 A	17-Nov-11		 		
BCLO130 Scrap Metal 3255 Tons	25%	46.0 27-Dec-10 A	31-May-11				
BCLO100 Concrete Demo Waste 140,000 Tons	22%	46.0 01-Feb-11 A	31-May-11				
BCLO140 Potential Asbestos Contaminated Mat. 7000 Tons	0 Tons 0%	8.0.01-Jun-11*	14-Jun-11	Ţ			
BCLO150 ACL 265,000 Tons T&P	%0	96.0 01-Jun-11	17-Nov-11	•			
BCLO110 LDR 100 Tons	%0	8.0 15-Jun-11	28-Jun-11	F			
100-C-7 Sampling, Backfill and Reveg		298.0 04-Aug-11	31-Jan-13				
BC502D14 Prepare Work Instruction	%0	64.0 04-Aug-11	29-Nov-11	•			
BC502D4 Closure Sampling & Analysis for 100-C-7	%0	26.0 30-Nov-11	18-Jan-12				
BC502D24 Prepare Closure Document	%0	89.0 19-Jan-12	26-Jun-12		<u>.</u>		
BC502D61 RL/Reg Approve Backfill Concurrence for 100-C-7	100-C-7 0%	8.0 26-Apr-12	09-May-12			,	
BC502C1 100-C-7 Backfill (258,686 BCMs)	%0	50.0 10-May-12	08-Aug-12				
BC502E2 100-C-7 Perform Revegetation	%0	8.0 21-Jan-13	31-Jan-13				
100-C-7:1 Sampling, Backfill and Reveg	· · · · · · · · · · · · · · · · · · ·	259.0 13-Oct-11	31-Jan-13				
BC50260 Prepare Work Instruction	%0	64.0 13-Oct-11	09-Feb-12				
BC50210 Closure Sampling & Analysis for 100-C-7:1	%0	26.0 13-Feb-12	28-Mar-12			Ţ	
BC50270 Prepare Closure Document	%0	89.0 29-Mar-12	05-Sep-12				
BC50220 RL/Reg Approve Backfill Concurrence 100-C-7:1	-C-7:1 0%	8.0 27-Jun-12*	11-Jul-12			,	
BC50230 100-C-7:1 Backfill (476,266 BCMs)	%0	95.0 12-Jul-12	03-Jan-13			<u></u>	
BC50240 100-C-7:1 Perform Revegetation	%0	8.0 21-Jan-13	31-Jan-13				,
Pit 24 Re-Contouring		16.0 07-Jan-13	31-Jan-13				
BC50250 Pit 24 Re-Contouring	960	16.0 07-Jan-13	31-Jan-13				•

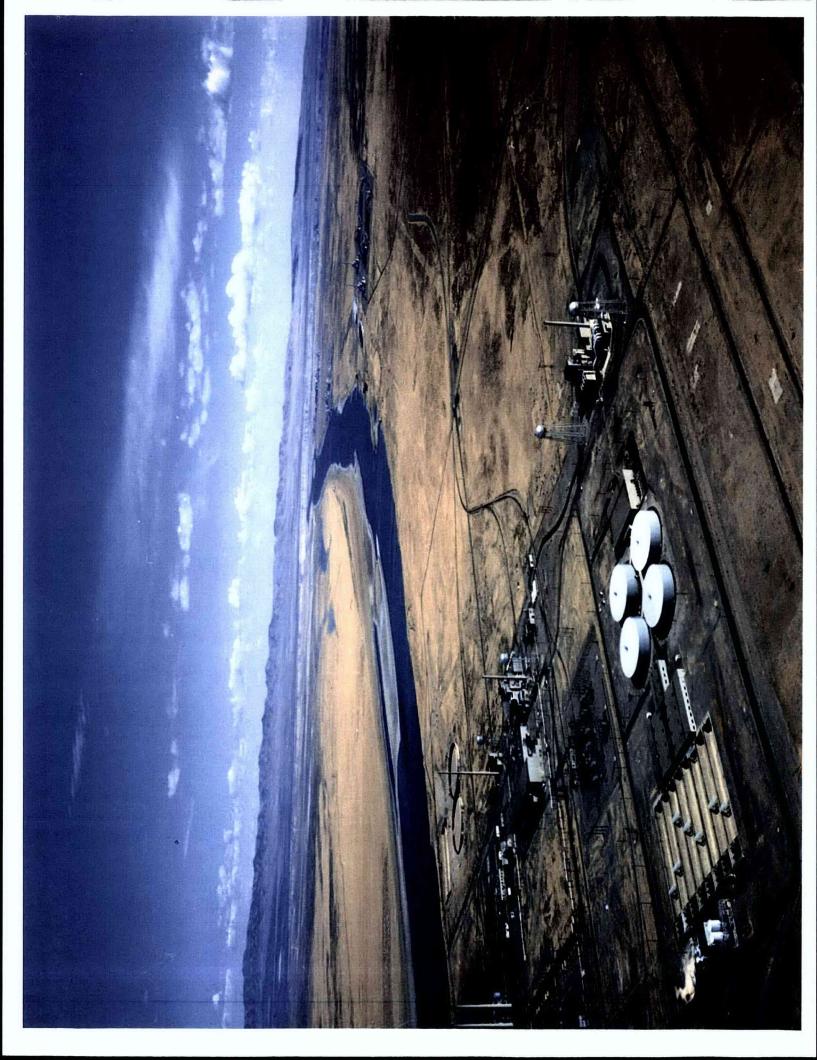
ACTIVITIES / ACTIONS SUPPORTING SCHEDULE

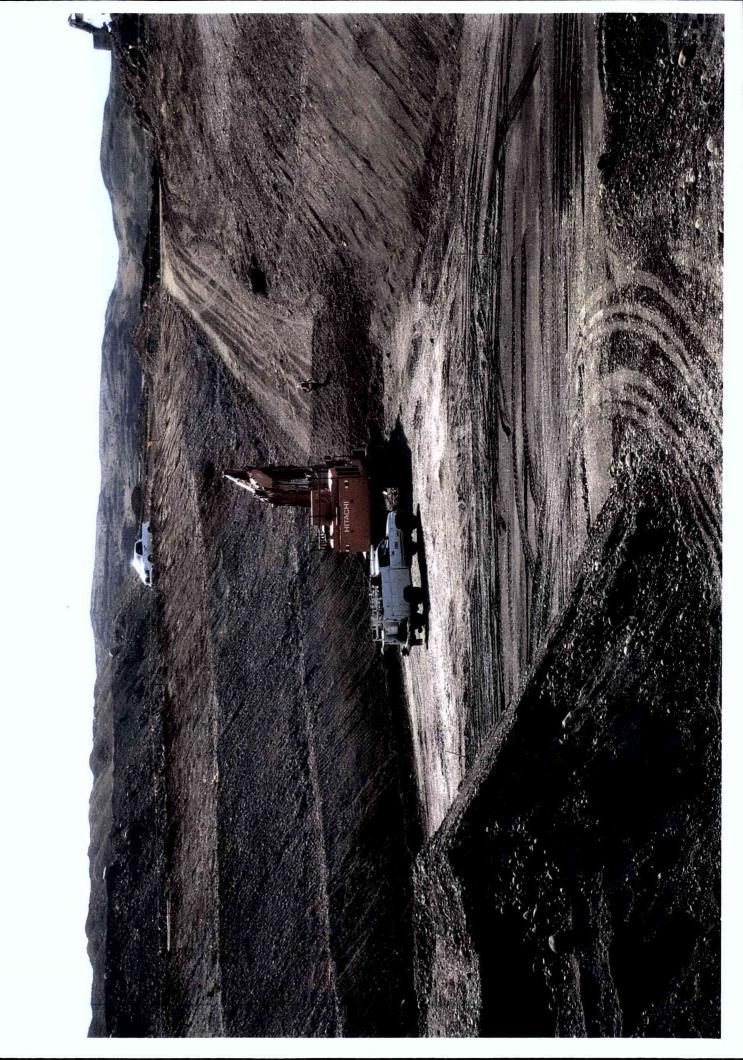
Continue to transport 100-C-7 concrete demo material to U-Canyon.

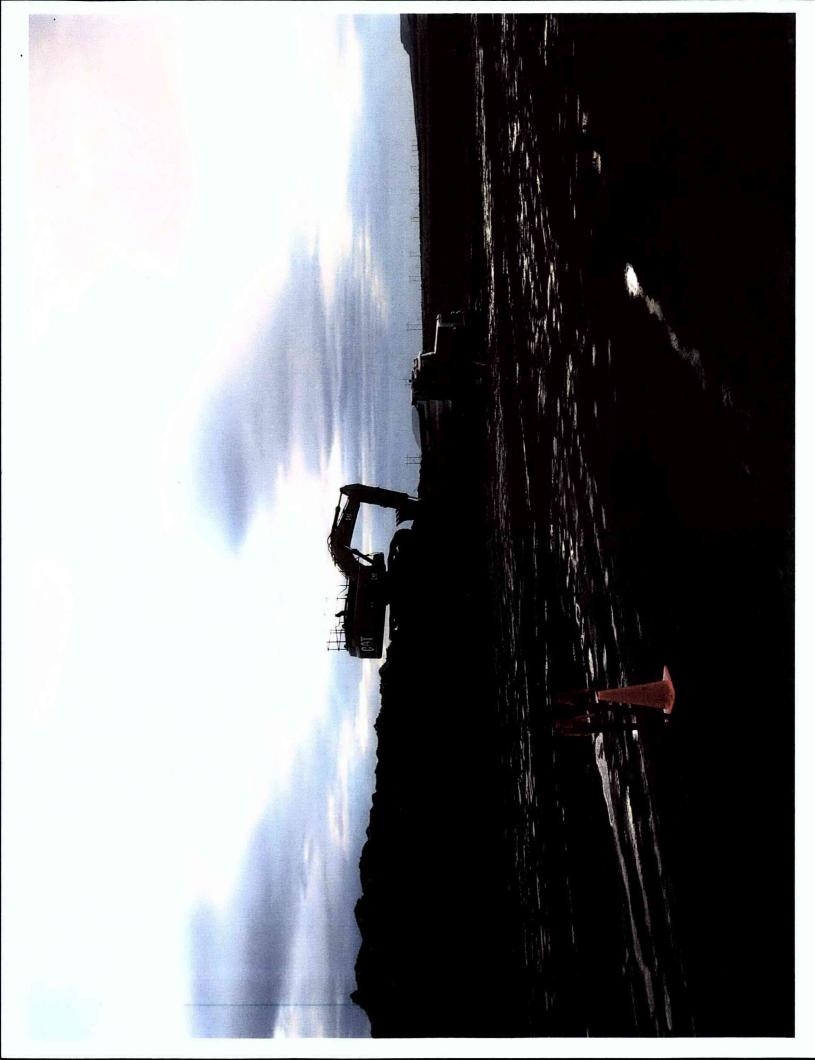
Milestones	Due Date	Status
PM - 31	6/30/2013	6/30/2013

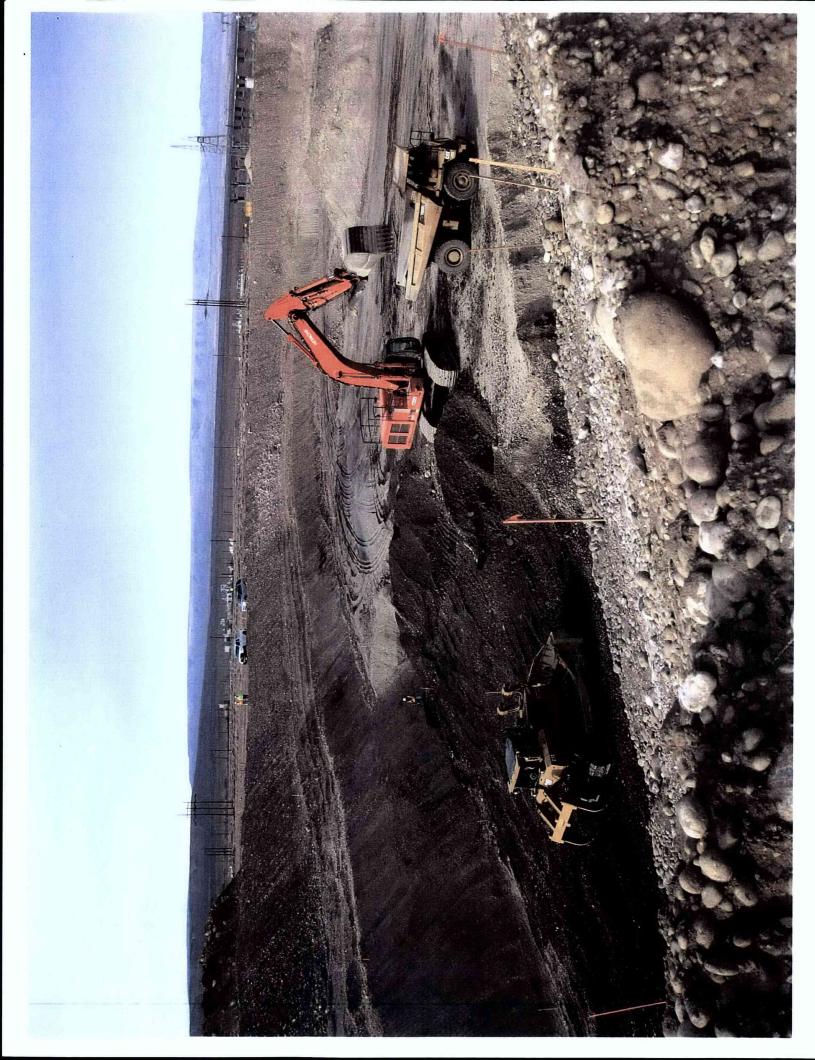
ISSUE / CONCERNS

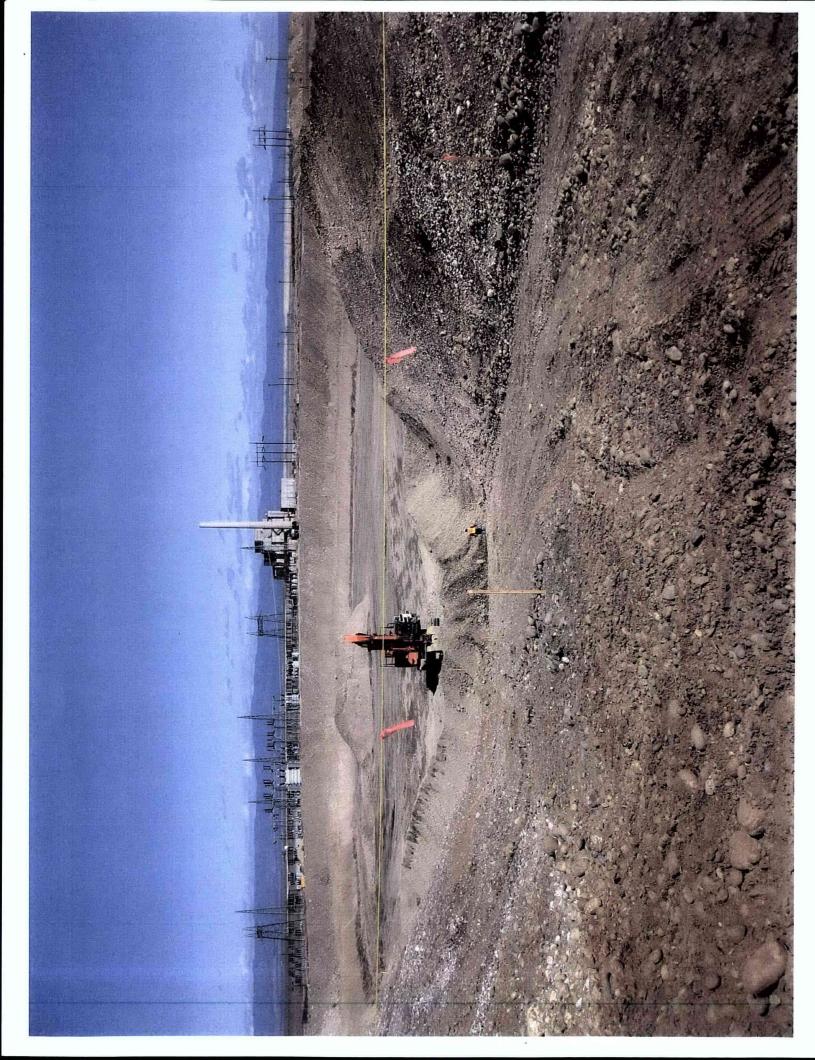












300 Area Field Remediation Status March 10, 2011

Current activities

- Continued excavation, loadout and demo at 321
- Sampled 300-15 process sewer around the 3706 slab.

Monthly look ahead

- Continue 300-15 excavations at select manholes
- Continue video inspections of 300-15 pipelines
- Continue excavation, loadout and demo at 321
- Complete cleanup excavation and loadout at 313
- Loadout at 3706

300 Area D4 Status March 10, 2011 100/300 Area Combined Unit Manager Meeting

Ongoing Activities

- 324 Finalizing preparations for additional characterization pushes to establish vertical distribution of source-term.
- 327 Continue below-grade demolition and preparations for lower SERF cell and dry carousel removal.
- 309 Preparing to remove remainder of containment structure to grade. Engineering on reactor core removal ongoing.
- 308 Glove box removal and shipment campaign continues.
- Initiated scoping and characterization of 340 Complex structures. Engineering on vault and vault tank removal ongoing.
- Initiated size reduction and processing of 337 High Bay demolition debris.

Current Demolition Preparations & Activities

- Continue 327 below-grade demolition.
- Preparing for 337 basement load-out and CRCTA vessel removal.
- Demolished 3621D, 352E, and 3717C Buildings.

60-Day Project Look Ahead

- Continue evaluation/characterization of source-term beneath 324 Building.
- Continue shipment of 308 glove-boxes, initiate Zone 1 duct removal, initiate removal of ACM duct on roof.
- Received final group of delayed release facilities from PNNL (326, 329, 320, 331C, D, H &G). Initiated planning, documentation, and characterization activities for demolition.
- Remove CRCTA vessel from 337 High Bay basement.

Control Number:	TPA Agreement/Change Control Form		Date Submitted:
TPA-CN-430	Change <u>X</u> Agreement Informa	ation	Feb. 24, 2011
			Date Approved:
	Operable Unit(s): 300 Area Removal Action	_	2 28 11
Document Number	/Title:	Date Do	cument Last Issued:
Removal Action Work P.	lan for River Corridor General Decommissioning Activities,	May 2010	
(DOE/RL-2010-34, Rev	. 0)		
Originator: Rudy Gu	nercia	Phone:	376-5494
Summary Discussion	on:		

Removal Action Work Plan for River Corridor General Decommissioning Activities (RAWP), DOE/RL-2010-34, Rev. 0, documents activities to be performed to achieve the non-time-critical removal action (NTCRA) for surplus facilities located in various areas within the scope of the River Corridor project on the Hanford Site. The removal process is achieved through the deactivation, decontamination, decommissioning, and demolition (D4) of surplus facilities. Both the RAWP and Action Memorandum for General Hanford Site Decommissioning Activities, DOE/RL-2010, Rev. 0, allow for inclusion of additional buildings provided they are sufficiently similar to buildings/structures already included in the NTCRA scope.

The 331-C, 331-D, 331-G, and 331-H facilities are added to the RAWP for *River Corridor General Decommissioning Activities*, based on their potential for contamination. Historically, these four facilities were included in the Engineering Evaluation/Cost Analysis #3 for 300 Area Facilities as structures with a potential for contamination, but were removed from the subsequent Action Memorandum #3 for 300 Area Facilities because a decision to declare them surplus had not been made at that time. The 331-C, 331-D, 331-G, and 331-H facilities are sufficiently similar to buildings/structures already included in the River Corridor NTCRA scope and a reasonable basis exists to include them in the RAWP, Table 1-1, Building/Structure list.

Justification and Impact of Change:

Both the RAWP and Action Memorandum for General Hanford Site Decommissioning Activities, DOE/RL-2010, Rev. 0, allow for inclusion of additional buildings provided they are sufficiently similar to buildings/structures already included in the NTCRA scope. The 331-C, 331-D, 331-G, and 331-H facilities are sufficiently similar to buildings/structures already included in the River Corridor NTCRA scope and a reasonable basis exists to include them in the RAWP, Table 1-1, Building/Structure list.

RAWP, Section 1.1, Table 1-1., Building/Structure List and Location:

Add the following:

Building Number	Area	Approximate Waste Quantity (tons)
331-C	300	1,127
331-D	300	223
331-G	300	249
331-Н	300	679

DOE Project Manager:	Date: 2/24/1/
EPA Project Manager: Larry Madling (1)	Date: Feb 28 2011
	Date: 2/24///
Per Action Plan for Implementation of the Hanford Consent Order a	
Section 9.3	-

Environmental Protection Mission Completion Project

March 10, 2011

Orphan Sites Evaluations

- Currently reviewing the findings of the 100-F/IU-2/IU-6 Area Segment 4 orphan sites process with RL. Will schedule regulatory briefings with both EPA and Ecology for late-March/early April.
- The field investigation task for 100-F/IU-2/IU-6 Segment 5 continues and is anticipated to be completed by the end of April.

Long-Term Stewardship

- Continued working with RL, MSA, and CHPRC regarding the 100-F/IU-2/IU-6 -Segment 1 turnover and transition package to support transition of interim surveillance and maintenance responsibilities between contractors.
- Continue with the development of the remedial action report for 100-F/IU-2/IU-6 Segment 1.
- Continue with the development of the remedial action report for the 100-BC-1 OU.

River Corridor Baseline Risk Assessment

- The Draft C Ecological Risk Assessment report is being finalized reflect RL preconcurrence review comments. The current focus is on developing Ecological Preliminary Remediation Goals (PRG) for soil. DOE intends to provide the Ecological PRGs to EPA and Ecology for their review and feedback during the next few weeks.
- The Draft C Human Health Risk Assessment report was transmitted to EPA and Ecology for review in late December 2010. EPA comments were submitted to DOE on February 8. Ecology comments are due April 5.

Remedial Investigation of Hanford Releases to Columbia River

- The data summary report was distributed on 2/16/11.
- Development of the Decisional Draft Human Health and Ecological risk assessment reports is continuing. Discussions with RL regarding some additional scope for the risk assessments are being finalized.

Document Review Look-Ahead

Document	Regulator Review Start	Duration
River Corridor Baseline Risk Assessment – Ecological Report (DOE/RL-2007-21, Volume I)	May 2011	45 days
SAP for Waste Site Transition Zone Sampling (DOE/RL-2010-115)	January 17, 2011 (actual)	45 days
100-F/IU-2/IU-6 - Segment 4 Orphan Sites Evaluation Report	June 2011	30 days

Point of Contact	Action No.	Deliverables	Due Date	Status
100 Area				
WCH	1-1	Submit Draft A of the River Corridor Baseline Risk Assessment Report.	6/1/2007	Completed-6/2007
WCH	1-2	Submit draft Sampling and Analysis Plan for Inter-Areas Shoreline Assessment.	8/1/2006	Completed-7/2006
WCH/RL	5.	Reassess and resubmit to EPA the protectiveness determinations for operable units 100-BC-1, 100-BC-2, 100-DR-1, 100-DR-2, 100-DR-2, 100-DR-2, 100-DR-2, 100-DR-2, 100-DR-3, 100-IU-2, 100-IU-6, 100-KR-1, 100-KR-2, 100-KR-4, 100-NR-1, 300-FR-1 and 300-FR-2 using new information from the River Corridor Baseline Risk Assessment and submit to EPA an addendum with, as appropriated, updated Protectiveness Determinations, Issues, and Follow-Up Actions.	2/15/2008	This action was to be coordinated with the finalization of the Risk Assessment. A Draft B Risk Assessment is now projected to be submitted early 2010.
<u>1</u> 2	2-1	Submit Draft A of the River Corridor Strategy for Achieving Final Cleanup Decisions in the River Corridor. This document will identify issues for integration and provide alternatives for future discussion between the Tri-Party Agencies on milestones for final records of decision in the River Corridor.	11/1/2006	Completed
Williams, Janice	2-2	Reach agreement between the Tri-Party Agencies on a strategy and schedule to obtain final records of decision in the river corridor.	11/30/2007	Completed. Final Approval Package for Tentative Agreement on the HFFACO (the TPA) Modifications Regarding Accelerated Groundwater and Soils Milestones, was signed by the Parties and issued in August 2009. This completed the action to establish the overall strategy to reach final records of decisions for the River Corridor.
Williams, Janice	5-3	Submit a Tri-Party Agreement change package with new milestones for submitting remedial investigation/feasibility study work plans and proposed plans for all operable units in the river corridor. New milestones shall require submission of remedial investigation/feasibility study work plans and proposed plans for final action at all of the following operable units that do not already have these documents approved: 100-BC-1, 100-BC-2, 100-BC-5, 100-DR-1, 100-DR-2, 100-FR-1, 100-FR-2, 100-FR-3, 100-HR-1, 100-HR-2, 100-HR-3, 100-IR-3, 100-IR-3, 100-IR-4, 100-IR-1, 100-IR-2, 300-FF-2, and 300-FF-5.	2/1/2008	Completed. Final Approval Package for Tentative Agreement on the HFFACO (the TPA) Modifications Regarding Accelerated Groundwater and Soils Milestones, was signed by the Parties and issued in August 2009. This completed the action to establish the overall strategy to reach final records of decisions for the River Corridor.
Robertson, Julie	3-1	Install three additional wells to further delineate the southeastern (inland) extent of the chromium groundwater plume from the 116-K-2 trench, northeast of the current injection wells. Wells installed as part of the pump-and-treat system expansion or injection well relocation may count towards this effort if appropriately located	8/1/2008	Completed - 1/2008. Drilling began on 18 KR-4 pump-and-treat wells on 10/4/07. Wells K153, 154 & 163 were drilled to address this action. Well development activities were completed for these wells in January 2008.
Robertson, Julie	144	Construct a new pump-and-treat facility to address the chromium groundwater plume in the KW Reactor area.	8/1/2008	Completed-1/2007. Operation of the KW pump-and-treat system began on 1/29/07. The system operated at design capacity of approximately 100 gpm using 4 extraction wells and 2 injection wells.
Robertson, Julie	<u>7</u>	Expand the 100-K pump-and-treat system by 378.5 liters (100 gallons) per minute to enhance remediation of the chromium plume between the 116-K-2 and the N Reactor perimeter fence.	8/1/2008	Completed - The existing KR-4 pump-and- treat system is operating at design capacity of approximately 300 gpm. Construction of the new KX P&T System was completed in September 2008. The facility was fully operational at 600gpm treatment capacity on May 20, 2009.

Bowles, Nathan	Bowles, Nathan	Robertson, Julie	Point of Contact
7.2	6-1	5-2	Action No.
Perform additional data collection to support risk assessment, provide to Ecology previously collected data, and coordinate with River Corridor sampling efforts to collect additional pore water data from new and existing aquifer tubes along the 100-NR-2 shoreline in order to assess water quality impacts.	Implement the treatability test plan for permeable reactive barrier utilizing apatite sequestration as described in the Strontium-90 Treatability Test Plan for 100-NR-02 Groundwater Operable Unit (DOE 2005c). Issue Treatability Test Report.	Add additional wells between 166-K-2 [Note: this is a typo and should read 116-K-2] trench and the N Reactor perimeter fence for groundwater extraction and connect the additional wells to the pump-and-treat system.	Deliverables
9/1/2008	9/1/2008	To be completed with Action 5-1	Due Date
Complete - Samples were collected from aquifer tubes in FY07 and FY08. Section 2.4.1 of the Groundwater Annual report discusses significant results. PNNL placed additional aquifer tubes and collected samples to identify the dimensions of SR-90 and TPH contaminants along the shoreline at 100-NR-2 in 2007. The results are detailed in PNNL-16714. Additional tubes were installed in 2008. Previous sample results have been provided to Ecology. Ecology feels that the river pore data collections from seeps in the river pore data collections from seeps in the river described in the Remedial Investigation Work Plan for Hanford Site Releases to the Columbia River, DOE/RL-2008-11, Rev. 0 should be completed prior to closing out this action. This additional pore water collection activity was completed and documented in WCH-380 and WCH 398. Additional pore-water sampling was conducted by in December 2010 under DOE/RL-2010-69, and results will be included in the 100-N RI/FS Report.	Completed - Two pilot injection tests were conducted – June and September 2006. DOE used the results of these tests and subsequent bench scale testing to modify the chemistry of injected solution. DOE conducted two injection campaigns in FY 2007. The first campaign targeted the Ringold formation when the water table was relatively low (February 28 through March 22). The second campaign targeted the Hanford formation when the water table was high (June 6 through July 10). The Interim Report was completed by PNNL in July 2008 (PNNL-17429).	Completed - Drilling was completed on 3/19/08. The K expansion wells K147, 148, 149, and 150 along with - existing wells K130 & 131 fulfill this action. The wells are connected to the KX P&T system.	Status

Point of Contact	Action No.	Deliverables	Due Date	Status
Biebesheimer, Fred	Z	Complete a field investigation to investigate additional sources of chromium groundwater contamination within the 100-D Area. D Area. Additional geologic and geochemical investigations of the vadose zone in the 100-D Area.	3/1/2009	Complete - Initial field work was completed in March 2007 with the drilling of 7 groundwater monitoring wells (DOE/RL-2006-74). These wells and selected existing wells are currently being monitored to refine the source area. Based on this investigation, four additional boreholes were drilled to further refine the source area. Beer Figure 8-1. A letter report describing completion of the field investigation was submitted to RL in September 2008 (reference). An investigation of the northeastern chromium plume, including vadose boreholes and wells, took place in FY 2008. Additional Characterization will be performed in the 100 Area RI/FS to address sources of chromium in the North Plume. PNNL is completing geochemical investigations to determine how chromium is refined on sediments. An interpretive
Biebesheimer, Fred	5	Perform additional characterization of the aquifer for chromium contamination between the 100-D and 100-H Area, in the area known as the "horn", and evaluate the need to perform remedial action to meet the remedial action objectives of the 100-D record of decision for interim action. This issue will also be addressed in the final record of decision.	9/30/2009	Complete. Initiated drilling of 21 wells in August 2007 (SGW-33844). All wells were completed January 2008. Nine sets of aquifer tubes have been installed and sampled in October and November 2007. Post sampling and well monitoring continues. See Figure 9-1.
Biebesheimer, Fred	8-5-	Incorporate the "horn" area into the 100-HR-3 interim record of decision treatment zone if Action 9-1 indicates "horn" contains a groundwater chromium plume that needs immediate remediation.	9/1/2009	Complete - This action is dependent on results of Action 9-1 above and was incorporated into the Systematic Planning Process for HR-3 OU. The results of Action 9-1 showed that the plume in the horn area was extensive, but only a small part was > 100 ug/L, the federal DWS. A portion of the plume exceeded the stake action level of 48 ug/L is scheduled for remedial action as part of RPO implementation under the interim ROD to meet remedial action objectives. The action was considered in the systematic planning proven for the RI/FS work plan.

Rohay, Virginia	Bymes, Mark	Benecke, Mark	Byrnes, Mark	Byrnes, Mark	200 Area	Biebesheimer, Fred	Biebesheimer, Fred (Note: this item was not part of the Executive Summary table in the CERCLA 5-year review but exists within the text in Section 1.4.6.4).	Shrimpton, Dave	Biebesheimer, Fred	Point of Contact
17-1	16-1	15-1	14-1	13-1		Ž	11.	===	10-1	Action No.
Evaluate expanding the soil-vapor extraction operations. Review converting former groundwater extraction well 299- W15-32 to a soil-vapor extraction well.	Increase the pump size in 200-ZP-1 extraction wells 299-W15-45 AND 299-W15-47.	Complete data quality objective process and sampling plan to further characterize the high soil conductivity measurements detected at B/C cribs and trenches.	Assess treatment options to address technetium-99 near T Tank Farm.	Complete a data quality objective process and sampling plan to further characterize the technetium-99 groundwater plume near T Tank Farm.		Perform additional characterization of the aquirer below the initial aquitard. [Note: this action is for H Area.]	Expand groundwater pump-and-treat extraction within the 100-D Area by 378.5 liters (100 gallons) per minute to enhance remediation of the chromium plume.	Initiate limited iron amendments to the insitu redox manipulation barrier to evaluate whether this enhances the performance.	Issue direction to the operating contractor to change operations to further minimize leakage from the 182-D reservoir.	Deliverables
3/29/2007	1/15/2007	11/28/2007	9/6/2007	1/15/2007		9/30/Z009	Completed 12/17/2010	9/1/2007	Completed prior to issuing the five-year review	Due Date
Completed- Soil-vapor operations should be expanded over the next 13 years. Current baseline schedule includes the conversion of 3 or 4 existing groundwater monitoring wells to SVE well. Well 299-W15-32 was converted to an SVE well in FY2006.	Completed-Pump size increase in 200-ZP-1 extraction wells 299-W15-45 and 299-W15-47 was omitted as a deliverable requirement as this work could no longer be accomplished because of declining water levels in these wells.	Completed-Sampling and Analysis Plan was approved on November 28, 2007.	Completed by the implementation of an additional pump-and-treat system.	Completed-Contract deliverable CD0510, "Data quality objective process and sampling plan to further characterize the technetium-99 groundwater plume near T Tank Farm" was completed and transmitted to DOE/RL on 21/15/07.		"Additional characterization was conducted via an aquifer rebound test and pumping from the RUM units in FY2009, as documented in SGW-47776, Aquifer Testing and Rebound Study in Support of 100-H Deep Chromium Investigation. In addition, several RUM wells are being drilled in support of the HR-3 RI/FS efforts."	Completed - Pump-and-treat extraction in the 100-D Area was expanded by 600 gpm (DX Expansion project). System was operational by 12/17/2010.	Completed - Field tests with zero valent iron occurred in FY 2008 and FY 2009. A report documenting the iron amendment test results will be submitted to RL.	Completed prior to Complete. A Timely Order was issued to issuing the five-year prevent the use of 182-D except in the event of an emergency situation, such as fire control or loss of other safety system water supplies (Reference: JLD-02-02-2007-01 Rev02)	Status

Point of Contact Action No.	Action No.	Deliverables	Due Date	Status
Byrnes, Mark	18-1	18-1 Prepare an explanation of significant difference for 200-UP-1 interim record of decision.	6/1/2008	6/1/2008 Completed February 24, 2009.
Borghese, Jane	19-1	Complete focused feasibility study for 300-FF-5 Operable Unit to provide better characterization of the uranium consequences and evaluate treatment alternatives. Concurrently test injection of polyphosphate into the aquifer to immobilize the uranium and reduce the concentration of dissolved uranium. These activities support a CERCLA proposed plan	9/1/2008	Complete. FH letter FH-0801578A R3, dated September 16, 2008, transmitted the Remediation Strategy for Uranium at the Hanford Site 300 Area, 300-FF-5 Operable Unit, DOE/RL-2008-36, Revision 0, which fulfilled this action in place of a Focused Feasibility Study.